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R. P. Smiraglia. Bibliocentrism Revisited: *RDA* and *FRBRoo*

Bibliocentrism Revisited:
RDA and *FRBRoo*

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Richard P. Smiraglia is a professor, Knowledge Organization Research Group in the iSchool at the University of Wisconsin-Milwaukee. He has quantitatively explored the phenomenon of instantiation among information objects, domain analysis for evolution of knowledge organization systems, and epistemological analysis of the role of authorship in bibliographic tradition. He is an associate researcher of the e-Humanities Group, of the Royal Netherlands Academy of Arts and Sciences (KNAW), and Editor-in-Chief of this journal.

Abstract: Bibliocentricity in the library catalog arose from the practice of resource description, which emerged from the simple listing of books as objects with little reference to their intellectual content. Combined with shifting cultural conceptions of authorship, this led to a complex system in which the implicit concept of "goodness" affected the efficacy of description of varying resources. Issues of domain-specificity, cultural origins or contexts of usage have been disregarded in deference to book-like considerations. *RDA* (*Resource Description and Access* provides for analytical descriptions using the knowledge-based *FRBR* conceptual model of entities based on the artifactual intersection of intellectual works and cultural information carriers. The more empirically-based *FRBRoo*, an object-oriented revision of the conceptual model, reflects the atemporality of instantiation. *FRBRoo* seems promising as a potential additional facet for expressing structural components of knowledge represented by traditionally conceptual KOSs. In this study two cases are analyzed from the point of view of both *RDA* and *FRBRoo*. Analysis shows how little synergy has been gained through *RDA*'s implementation of the *FRBR* model. The cases analyzed using *RDA* and *FRBRoo* serve as artifacts of cultural discourse, by which the measure of objective violence reflects the degree to which individual works still cannot be disambiguated.

1.0 Bibliocentricity

A long history of bibliocentricity in the library catalog has been demonstrated (Smiraglia 2009; Smiraglia, Lee and Olson 2010). The practice of resource description emerged from the simple listing of books as objects with little reference to their intellectual content. This combined with shifting cultural conceptions of authorship (Smiraglia and Lee 2012; Johns 2009) led to a complex system in which the implicit concept of "goodness" affected the efficacy of description of varying resources. Books were good and nonbooks were not, thus books were described completely and non-book materials were not. Cataloging rules were based on transcription of bibliographic data from title pages of books, meaning parallel transcriptions from non-book resources were not adequate to the task of identify-

ing specific artifacts. The concept of access was relegated to the primary "main entry," which meant adding a formulated name of the creator on top of the title-page transcription, which coincidentally managed in most cases to mimic a citation for a work.

For example, Hope A. Olson is the author of a book titled *The Power to Name: Locating the Limits of Subject Representation in Libraries*. A standard *Chicago Manual of Style* citation for this work might be:

> Olson, Hope A. 2002. *The Power to Name: Locating the Limits of Subject Representation in Libraries*. Dordrecht: Kluwer Academic Publishers.

Standard resource description of this book according to Anglo-American practice might give us this transcription:

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The power to name : locating the limits of subject representation in libraries / Hope A. Olson. – Dordrecht : Kluwer, 2002.

Thus superimposing the inverted name of the author, called here a "heading" because it serves editorially to locate the description, yields a catalog entry thus:

Olson, Hope A.
   The power to name : ...

This state of affairs persists even now in machine-readable cataloging records:

100 1_ Olson, Hope A.
245 14 The power to name : ...

For some majority of resources, singleton manifestations of books with no editions, translations or adaptations, this approach succeeded at providing a unique identifier in the library catalog. For about a third of all resources though (Smiraglia 2001), following some power law, this approach was never adequate, because the titles proper of translations or adaptations would not fall in the same happenstancical alphabetical sequence, requiring instead the addition of interpolated "uniform" titles in square brackets. Such is the case for most music collected by libraries, most of it collected deliberately in multiple manifestations of recorded performances (Papakhian 1985). Resources in other media succumbed to minimal description transcribed when possible from containers and supplemented by free-form "summary" annotations. Works with no "author," e.g., motion pictures or even videorecordings of captured concerts, were treated as though in a kind of double jeopardy, coupling poor description with jumbled index entries consisting of a plethora of potentially variant titles and the names of everyone associated with any creative role. In the end, issues of domain-specificity, cultural origins or contexts of usage were disregarded in deference to "bibliographic," or book-like, considerations.

Knowledge organization (KO) is rarely concerned directly with problems of resource description. The focus of KO instead is on systems for organizing conceptual knowledge. But as Smiraglia Lee and Olson (2010) and Smiraglia and Lee (2012) demonstrated, the citation-like "headings" used in catalogs function as the nominal anchors for classes of resources associated with the "authors" to whom attribution is given, and headings for their works function as nominal anchors for divisions of those classes. Traditional concept-driven knowledge organization systems (KOSs) rarely take author-based structures into account. Collectively, bibliographic KOSs remain mired in "bibliocentricity" (Smiraglia 2009)—a

form of construct-driven bias in KOSs that constrains order of and access to resources that are not associated with specific books.

2.0 A Digital Bibliographic World Order?

The online catalog of the digital age is just one of many retrieval systems making up a rich complex of tools for resource discovery. It has the potential to provide a structured precise domain-specific and culture-sensitive gateway for resource discovery across cultural institutions. Smiraglia (2014) has called for a synergistic era in which information is seen as a cultural action, information objects are cultural artifacts and cross-institutional information-sharing is a form of cultural synergy. Such an era requires resource description that is itself synergistic, rather than bibliocentric. KOSs increasingly are generated from domain-centric ontologies, increasing the breadth of conceptual knowledge that can be structured for discovery. Embrace of the concept of faceted KOSs has led to the notion of classification interaction (Smiraglia, van den Heuvel and Dousa 2011; Smiraglia and van den Heuvel 2013), by which faceted KOSs could potentially incorporate a variety of conceptual and structural orderings. Specifically, it seems appropriate that an empirically derived model of instantiation might provide greater sensitivity in KOSs by allowing the representation of ideational realization to the standard representations of concept and space-time.

RDA (*Resource Description and Access*), the latest code for resource description, provides for analytical descriptions using the knowledge-based (if flawed by its requirement of temporality among entities) *FRBR* (IFLA 1998) conceptual model of entities based on the artifactual intersection of intellectual works and cultural information carriers. The more empirically based *FRBRoo* (Bekiari et al. 2014), an object-oriented revision of the conceptual model, reflects the atemporality of instantiation, which is itself a cultural phenomenon. That is, instantiation (or realization in time) of a work in tangible form is affected by cultural catalysts that are complex and flexible. In *FRBRoo*, entities are broken into associated phenomena named "objects," and are oriented to each other by their attributes. The various models, then, do not rely on temporality or mutually exclusive classes, but rather on associative principles of linked attributes. *FRBR*'s "W-E-M-I" (works-expressions-manifestations-items) entities in *FRBRoo* become objects that may be associated multiply according to their related attributes. In a given instantiation network derived from an ideational conception there might be many works, for each of which there might be many expressions. Not all expressions spawn manifestations, and so forth. Also a distinction is made between the intellectual work, and publication events, which might spawn manifestations.

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FRBRoo seems promising as a potential additional facet for expressing structural components of knowledge represented by traditionally conceptual KOSs. To succeed, of course, would require the representation of resources using the *FRBRoo* schema, rather than the traditional bibliocentric flat model of library catalogs. An interesting question, then, is whether *RDA* implementation promises to play a significant role in both representation of future resources and conversion of those already represented by the billions in traditional library catalogs. This case study is an attempt to answer that question preliminarily.

3.0 Cases Analyzed

Smiraglia (2009) analyzed the resource description available for seven resources. The seven resources are representative of intellectual content that might be found in many academic or public libraries. But they also represent cultural anchor points for both artifactual resources in cultural heritage institutions as well as non-institutional (or web-based) digital resources. The collectivity of the breadth of these cases is demonstrative of the cultural discourse that surrounds the "canonicity" of any instantiating work. In the 2009 analysis bibliocentrism was abundant in the descriptions of the non-book resources, especially barely described videorecordings. The music descriptions were complex and clearly domain-centric. The biographies suffered from superficial description that might logically hamper retrieval of some fairly complex subject content. In all seven cases, detail concerning complex layers of intellectual responsibility—instantiation in other words—were missing or confusedly intermingled with transcriptions from specific physical items. In this study those cases are revisited from the point of view of both *RDA* and *FRBRoo*. In the 2009 study Library of Congress descriptive cataloging created using the *Anglo-American Cataloguing Rules, 2nd ed.* (*AACR2*) were downloaded from the library's online catalog. Given *AACR2*'s flat-file one-book-one-record approach to resource description, analysis was based on close reading of those descriptive cataloging records.

In the present study, because of space limitations, only two cases are illustrated. Each case was searched in OCLC's WorldCat to locate resource descriptions of all instantiations findable in the WorldCat. Space considerations here prevent display of those records in detail. Resource descriptions have been revised using *RDA* as best understood at present. Because *RDA* has no specific display format, non-MARC ISBD descriptions have been compiled, and appear in abbreviated form here. Each instantiation network is mapped for analysis using *FRBRoo*. Subject cataloging and classification, which are not yet incorporated into *RDA*, are not included in this analysis.
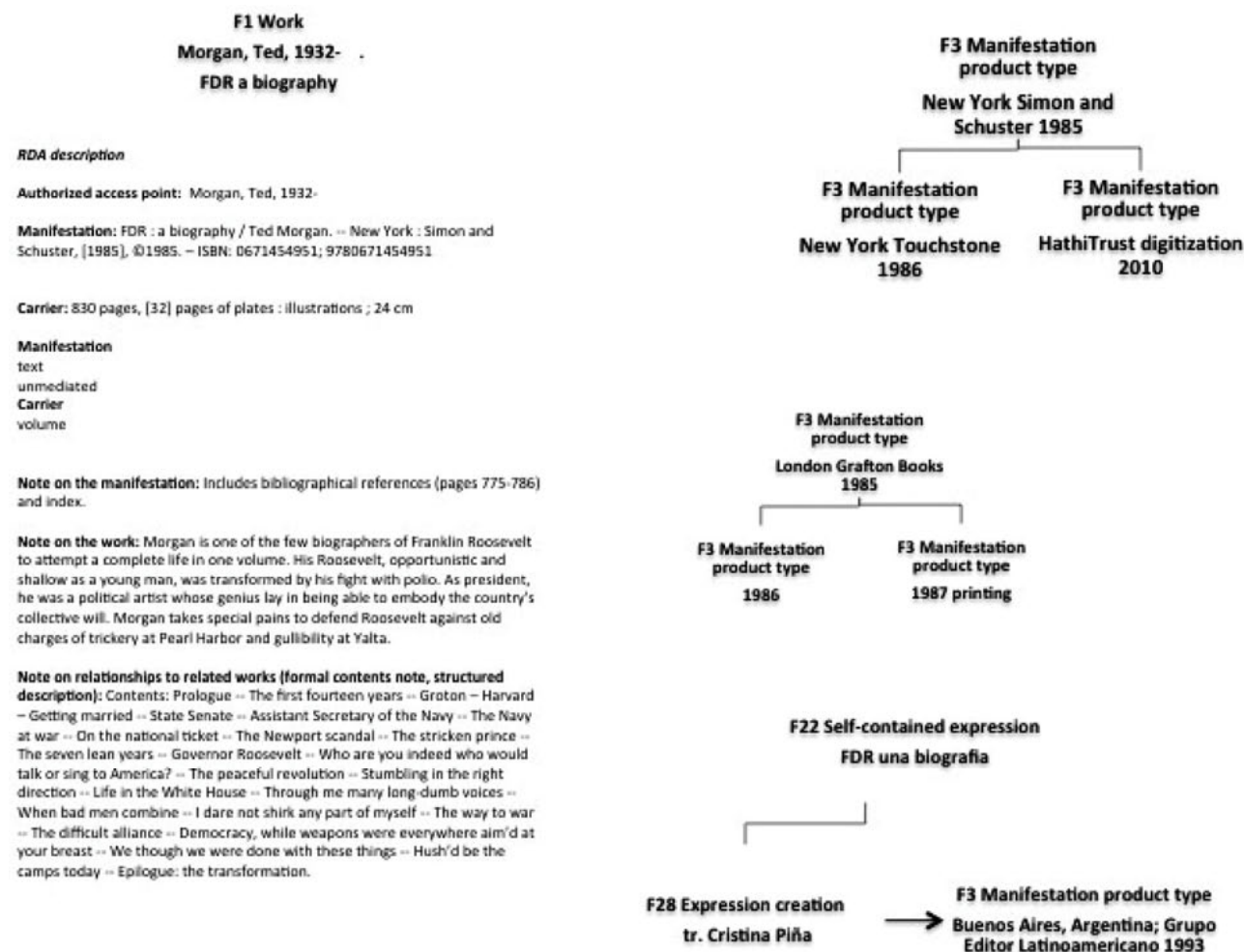
3.1 FDR a Biography

Figure 1 contains an *RDA* description of the original edition (manifestation) of Ted Morgan's biography of Franklin Delano Roosevelt. Accompanying the resource description is a chart of the *FRBRoo* relationships demonstrated in the instantiation network (five printings, one digitization, and one translation, in colloquial terms; seven bibliographic records in the WorldCat).

Like many academic works, Morgan's respected biography has been manifest several times, reflecting market interest at some level. There are a few, not many, instantiations, reflecting the absence of academic canonicity (Smiraglia 2008), which is required to spawn a complex work. In traditional bibliographic terms we might say there are two editions—the original New York 1985 publication and a simultaneous London publication, each of these has been reprinted, and the original has been digitized. There is one translation into Spanish, published in Argentina. In the library catalog at present, These would all line up under either Morgan's name or the title proper in chronological order. Whether the translation would be disambiguated or not would be dependent on whether *RDA* authorized author-title access points were used (in which case the preferred title portion of the translation would include the designator "Spanish").

To the *RDA* description in the WorldCat I have added a full contents note. The case analysis of this work in the 2009 study demonstrated the importance of the chapter titles in making apparent the many ways in which this biography differs from earlier ones. *RDA* does not exactly suggest contents notes; rather it says to record relationships among works, and if we consider that each chapter is an excerpted work, then it makes some sense to record them all in this resource description. Library of Congress policy decisions say to make contents notes for the contents of single volumes, with few exceptions. Regardless, the advances in *RDA* come from the alignment, or disambiguation, of the entities represented in the resource description. In a non-MARC catalog with *FRBR* entities treated separately, for instance, the simple publication details of the seven manifestations would be represented by simple transcriptions, and the two notes related to the work—the summary and the individual chapter titles—would be found in a "work" record, to which, presumably, the manifestation records would be linked. This is an advancement in the ethical implications of resource description, allowing fuller description of works.

FRBRoo goes further, and separates the intellectual manifestations from the product-specific publication expressions. Were strings developed from *FRBRoo* mapping added as auxiliaries to faceted classifications, we might discover that F4:F22:F28:F3 led us directly to the Spanish

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Figure 1. Ted Morgan's *FDR a Biography*

translation. This is a simple sign of the potential utility of *FRBRoo* as a structural facet.

3.2. The Quintessential Billie Holiday

The Quintessential Billie Holiday is an anthology of Holliday's recordings, released on nine discs between 1987 and 1991. A three-disc boxed set containing "volumes" 1-3 was issued on CD in 1998; this manifestation was used in the earlier study (Smiraglia 2009, 682):

> The Holiday collection contains three CD "volumes," each of which is accompanied by a small booklet in the cover of its jewel-case, including performance notes and commentary. The recordings are digital remasters from analog tape recordings of Holiday in performance or in recording studios.

In the WorldCat a dizzying array of 56 bibliographic records appear for this title, but in the end it turns out there are two manifestations from Columbia Records in New

York with phonograph copyright dates 1987-1991, containing digitally remastered recordings, one released on nine LPs in 1991, and a boxed set of 3 CDs released in 1998. There seem also to have been separate distributions by CBS Canada and CBS Europe of the nine disc set on cassette, LP, and CD, thus begging the question of whether the recording was originally released in parts over time, or in other words, as a continuing resource. The LC cataloging was used in the 2009 paper to demonstrate the ludicrous bibliocentrism resulting in a simple title only transcription with details of publication and the note that there were nine discs. Figure 2 contains an *RDA* interpretation, based on segments found in several of the WorldCat records but converted to *RDA* transcription and note conventions.

RDA has provided an improved atmosphere for detailed resource description of sound recordings, and this figure shows some of that detail. By separating work from manifestation it is possible to give better detail about each. On the other hand, *RDA* has not gone far enough with sound, because it has implicit the as-

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Authorized access point for performer: Holiday, Billie, 1915-1959.

Manifestation: The quintessential Billie Holiday / Billie Holiday. -- New York, NY : Columbia, [1998], ℗1987-℗1988. -- UPC 07464406462 (v. 1), 07464407902 (v. 2), 07464440482 (v. 3). -- (Columbia jazz masterpieces)

Carrier: 3 audio discs (23 hrs., 33 min.) ; 4 ¾ in.

Manifestation:
digital
audio
performed music
Carrier:
audio disc

Notes on the manifestation: Digitally mastered analog recordings. -- Program notes by Michael Brooks with personnel and recording dates inserted in each container. -- Columbia CK 44048 (v. 1) ; CK 40790 (v. 2) ; CK 40606 (v. 3)

Notes on the work: Billie Holiday, vocals, with various jazz ensembles. -- Recorded 1933-1942 in New York. -- Original recordings produced by John Hammond (v. 1-3) and Bernie Hanighan (v. 2-3). -- Contents: v. 1, 1933-1935. Your mother's son-in-law / Nichols, Holiner [2:43] -- Riffin' the scotch / Mercer, McDonough, Goodman, Buck [2:33] -- I wished on the moon / Parker, Rainger [3:05] -- What a little moonlight can do / H. Woods [2:59] -- Miss Brown to you / Robin, Whiting, Rainger [3:01] -- A sunbonnet blue / Kahal, Fain [2:49] -- What a night, what a moon, what a girl / J.J. Loeb [2:57] -- I'm painting the town red / Tobias, Newman, Stept [2:59] -- It's too hot for words / Samuels, Whitcup, Powell [2:47] -- Twenty-four hours a day / Swanstrom, Hanley [3:01] -- Yankee Doodle never went to town / Freed, Hanighan [2:44] -- Eeny meeny miney mo / Mercer, Maineck [3:12] -- If you were mine / Mercer, Maineck [3:12] -- These 'n that 'n' those / Pascal, Fairchild [3:12] -- You let me down / Dubin, Warren [2:53] -- Spreadin' rhythm around / Koehler, McHugh [2:54]. -- v. 2. Life begins when you're in love / Brown, Schertzinger [3:01] -- It's like reaching for the moon / Sherman, Lewis, Marqusee [3:19] -- These foolish things / Strachey, Marvell, Walker [3:16] -- I cried for you / Freed, Arnheim, Lyman [3:11] -- Guess who / Freed, Lane [3:08] -- Did I remember? / Adamson, Donaldson [2:49] -- No regrets / Tobias, Ingraham [2:35] -- Summertime / Heyward, G. Gershwin, I. Gershwin [2:53] -- Billie's blues / B. Holiday [2:37] -- A fine romance / Fields, Kern [2:49] -- I can't pretend / Tobias, Rusincky, Breuder [3:03] -- One, two, button your shoe / Johnston, Burke [2:47] -- Let's call a heart a heart / Johnston, Burke [3:01] -- Easy to love / C. Porter [3:10] -- With thee I swing / Adlam, Hyde, Stillman [3:14] -- The way you look tonight / Fields, Kern [2:59]. -- v. 3, 1936-1937. Who loves you? / Davis, Coots [3:11] -- Pennies from heaven / Johnston, Burke [3:15] -- That's life I guess / Lewis, DeRose [3:02] -- I can't give you anything but love (baby) / Fields, McHugh [3:26] -- One never knows, does one? / Gordon, Revel [3:02] -- I've got my love to keep me warm / I. Berlin [2:54] -- If my heart could only talk / Samuels, Whitcup, Powell [3:02] -- Please keep me in your dreams / Seymour, Lawnhurst [2:18] -- He ain't got rhythm / I. Berlin [2:48] -- This year's kisses / I. Berlin [3:08] -- Why was I born / Hammerstein II, Kern [2:49] -- I must have that man / Fields, McHugh [2:52] -- The mood that I'm in / Silver, Sherman [2:58] -- You showed me the way / Fitzgerald, McCrae, Webb, Green [2:58] -- Sentimental & melancholy / Mercer, Whiting [2:37] -- My last affair / H. Johnson [3:07].

Figure 2. The Quintessential Billie Holiday

sumption that the music recorded is "the work," and the manifestations represent the actual, commercial resources. The problem is, of course, that the work in this case is complex, consisting of music, a performance, an instance of recording, a product of the recording, and re-engineered product of that recording, which eventually become manifest in several carriers. Setting aside the fact that we have many individual recording events represented here, as well as the fact that the manifestations seem to have been produced as parts of a continuing resource (both of which are missing from the figure to save space), we still see in Figure 2 that *FRBRoo* gives a better mapping of the stages of the various works represented in this resource. To the extent that ethical resource description leads to disambiguated clusters of manifestations *RDA* fails the test. Also, to the extent that ethical resource description permits the detailed analysis of related works—in this case the songs, the performances of them, the recordings of those, and the re-engineering—*RDA* again fails the test. Incorporation of the *FRBRoo* model into *RDA* in place of the original *FRBR* model (often now called "ER" for "entity relationship") would alleviate this problem. In effect, each work should be de-

scribed separately so all of them could be linked together, with the manifestations clearly containing the Columbia 1987-1991 reengineered set of recordings.

4.0 Objective Violence and Synergistic Description

Our limited analysis of two cases still demonstrates how very little synergy has been gained through *RDA*'s implementation of the *FRBR* model. By extending the analysis to the *FRBRoo* model we can see a potential path toward synergistic resource description. *FRBRoo* shows us that the class of "Ted Morgan's writings" has a division "*FDR a Biography*," and that that division has at least two subdivisions, the manifestations published in New York and London, and the Argentinian Spanish translation. *The Quintessential Billie Holiday*, a sound recording anthology of re-engineered recordings, represents a newly manifest commercial product derived from historic recordings. The class of "Billie Holiday's recordings" has many divisions, here brought together as a complex collection. In both cases, use of a form of structural facet based on *FRBRoo* allows us to express the complexity of works that remains unavailable from *RDA*-driven resource de-

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scription. Synergistic description requires the acknowledgement of the cultural artifactual nature of information resources such as these. *RDA* in this analysis represents an improvement from the past, but falls short at disambiguation of the artifacts represented.

Tennis (2013) suggested a basic ethical stance for engaged knowledge organization in which any form of bias is demonstrably seen as a form of objective violence. That is, when harm arises from biased knowledge organization, the parties harmed have been subjected to a form of objective violence (as opposed to specific violent acts, which are subjective). The cases analyzed using *RDA* and *FRBRoo* serve as artifacts of cultural discourse, by which the measure of objective violence reflects the degree to which individual works still cannot be disambiguated. *RDA*-driven resource description still prohibits resource discovery, a kind of systemic objective violence. The current descriptive milieu still is not engaged knowledge organization.

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